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TO: Each Supervisor

FROM: Cynthia A. Harding, M.P.H.
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SUBJECT: **TUBERCULOSIS IN LOS ANGELES COUNTY – 2015 INTERIM REPORT**

This is to provide you with an interim report summarizing the tuberculosis (TB) cases reported during the first six months of 2015, and an update on interventions for controlling and preventing the disease in Los Angeles County (LAC). Our prior report to your Board on May 21, 2015 provided the TB data for 2014.

The total number of confirmed TB cases reported in LAC during the first six months of 2015 was 249, with 19 (7.6%) of these cases reporting homelessness. Similar to previous years, 79% of the confirmed TB cases occurred among the foreign born, many of whom likely acquired TB infection in their country of origin prior to immigrating to the United States and later developed TB disease after their arrival.

The attached report provides additional information on race-ethnicity and geography for the 2015 TB cases in Los Angeles County. In addition, the report provides information about the ongoing work of the Department in TB prevention and control, including efforts to address TB in the homeless.

If you have any questions or need additional information, please let me know.

CAH:rkf/dd
PH:1303:001

Attachment

c: Interim Chief Executive Officer
Interim County Counsel
Acting Executive Officer, Board of Supervisors

TUBERCULOSIS IN LOS ANGELES COUNTY
2015 INTERIM REPORT

Introduction

This summary provides information about the total number of confirmed tuberculosis (TB) cases reported during the first six months of 2015, and an update on strategies for controlling and preventing the disease in Los Angeles County (LAC). The key points in this report are:

- The number of tuberculosis cases nationally and locally continues to decrease.
- The total number of TB cases in LAC for the first six months of 2015 is 249, with 19 (7.6%) of total cases reporting homelessness and 79% of total cases being foreign born.
- Targeted testing and treatment of TB infection continue to be prioritized as strategies to prevent TB infection from developing into TB disease. A comprehensive response has been implemented by Department of Public Health (DPH), along with community partners, to improve contact investigation outcomes for outbreak cases, establish on-site testing and screening services, and establish intake screening with a focus on active case finding.

Current Status of Tuberculosis in Los Angeles County

There were 249 confirmed TB cases reported by LAC during the first six months of 2015.

- Table 1 shows that among these 249 cases: 153 (61%) are male; 72 (29%) are 65 years of age or older; 111 (45%) are Asian; 106 (43%) were Hispanic; and 19 (7.6%) are homeless.
- Table 2 details geographic distribution of TB cases by Service Planning Areas (SPA) based on the patient's place of residence at time of TB disease confirmation for all 249 TB cases and for the 19 homeless TB cases.

TB cases among foreign-born individuals continue to represent the majority of cases reported annually, accounting for 79% of the 249 total TB cases (Table 1). Many of these foreign-born cases of TB disease were among persons who likely acquired their TB infection in their countries of origin and then progressed to TB disease at some point after their arrival in the United States, often many years later and connected with onset of chronic diseases like diabetes, autoimmune disorders, or other immune-compromising conditions.

Over the past 22 years since the 1992 peak of the nationwide TB epidemic, there has been an extraordinary decline in the number of TB cases reported annually. TB disease incidence rates decreased over the same period of time, with LAC recording an incidence rate of 6.2 cases per 100,000 persons in 2014, however this is still higher than the California incidence rate of 5.6 cases per 100,000 persons and twice the national TB disease incidence rate of 3.0. This decline in LAC can be attributed to several factors, including intensive Public Health Nurse case management, the use of directly observed therapy (DOT) to ensure completion of treatment, timely and thorough contact investigations of infectious cases, and improved infection control measures.

Drug resistant TB, including multi-drug resistant TB (MDR-TB), continues to be a concern for TB prevention and control efforts globally. In LAC MDR-TB cases comprise approximately 1% of the overall cases reported.

TUBERCULOSIS PREVENTION AND CONTROL STRATEGIES

The Department of Public Health (DPH) continues to focus on strategies that have achieved significant reductions in TB morbidity. However, to accelerate the decline of TB in LAC, DPH must prioritize strategies which will prevent TB infection from developing into TB disease, specifically, targeted testing and treatment of TB infection. To enhance and support these strategies, the TB Control Program (TBCP) has organized three teams within TBCP that collaborate with DPH Community Health Services Division (CHS), community partners, and shelter operators to track and decrease TB transmission.

- **Contact Investigation Monitoring and Assessment (CIMA) Unit**: Serves as the lead unit responsible for monitoring and assessing contact investigation activities. The CIMA unit works with CHS on contact investigations.

- **TB Contact Investigation Outbreak (CIOB) Team**: Provides oversight of contact investigations related to homeless index patients, including registering the case in the TBCP Contact Investigation – Outbreak Log (CIOB Log)

- **Genotype Cluster Identification and Assessment Unit:** Reviews all genotype results returned by the National TB Genotyping and Surveillance Laboratory on a weekly basis in collaboration with the DPH Public Health Lab.

During 2014, DPH pursued several strategies that we continue to build upon to reduce TB transmission among the homeless sheltered population.

Strategy 1: Establish Intake Screening with a Focus on Active Case Finding

Program staff have been working closely with shelter administrative staff at a major downtown homeless shelter to ensure that staff are aware of how to minimize possible TB exposure within their facility. The focus of our efforts have been to integrate a simple TB symptoms questionnaire at client registration and implement a "cough alert" log within the sleeping area and refer symptomatic clients for evaluation.

TBCP staff have developed a TB screening questionnaire that shelter staff can use to query new clients entering the shelter. Its use triggers a referral process that directs clients found to have a cough and at least one other TB symptom to a local County hospital for medical screening. It also directs clients without prior TB medical screening who are asymptomatic (i.e., less likely infectious) to either the shelter's own homeless medical provider or to a DPH CHS TB clinic. TBCP staff have worked with the two CHS clinics within the skid row area, Central Health Center, and Martin Luther King, Jr. (MLK) Center for Public Health, to improve referral of non-infectious patients to county facilities.

The cough alert log at this shelter has been reviewed daily by TBCP liaison. Requests have also been made to the Los Angeles Homeless Services Authority (LAHSA) to capture client responses to these TB screening questionnaires within LAHSA's Homeless Management Information System.

Strategy 2: Improve Contact Investigation Outcomes for Outbreaks

The TBCP collaborated with CHS SPA 6 in a recent large-scale investigation at a large shelter during this time period. This investigation involved TB cases that had spent significant time at the shelter during their infectious period. TBCP staff assisted CHS in the investigation by obtaining shelter histories for the three cases and identified over 1,300 possible contacts that shared at least one night with these cases. TBCP assisted the MLK Center for Public Health with prioritizing the contacts based on the number of exposure nights, and identified 127 high priority contacts with over 50 nights of exposure. On-site testing at the shelter was delivered one night per week for eight weeks by CHS staff, who were able to identify 54% of the high priority contacts still returning to this shelter nightly. DPH field staff continue the search for the other contacts.

Strategy 3: Establish On-Site TB Clearance Screening and Testing Service

In March 2015, TBCP established an on-site TB Clearance service for clients at one of the local large homeless shelters that has housed homeless TB cases. TB screening and testing services coincide with the shelter's weekly new client orientation session. Between March and June, a total of 353 clients were referred for TB clearance.

DPH is working in partnership with homeless shelter operators and health care providers to address emerging challenges and to ensure the sustainability of interventions within this population. As part of this effort CHS is in the early planning stages to implement a TB screening clinic onsite at this same shelter 5 days per week that will incorporate shorter duration treatment regimens. Planning for the clinic will be led by SPA 6, in collaboration with TBCP.

As outlined in prior reports, factors that can increase the risk of TB transmission between homeless individuals and shelter staff continue to pose challenges for DPH including: high mobility of the population; crowding that may occur in shelter facilities, especially during the winter season; mental health; nutritional issues; and concurrent medical conditions that make homeless individuals more vulnerable to developing active TB disease. Enabled by the recently augmented TB funding to lower transmission of TB disease in this vulnerable, challenging population, DPH is enhancing capacity to assess and address these issues, in partnership with DHS, shelter operators, and other community providers.

Table 1. Demographics for 2015 YTD TB Cases for January 1, 2015 to June 30, 2015		
	All TB Cases	
Year	2015 YTD	
Total Cases	249	
Sex	**Frequency**	**Percent**
Female	96	39%
Male	153	61%
Age Group	**Frequency**	**Percent**
00-04	1	<1%
5-14	4	2%
15-34	47	19%
35-44	29	12%
45-54	44	18%
55-64	52	21%
65+	72	29%
Race/Ethnicity	**Frequency**	**Percent**
Hispanic	106	43%
Asian	111	45%
Black	21	8%
Non-Hispanic White	11	4%
Country of Origin	**Frequency**	**Percent**
Foreign-born	196	79%
U.S.-born	53	21%

Table 2. TB Cases by Service Planning Area (SPA), 2015 YTD†					
Service Planning Area	All TB Cases			Homeless TB Cases	
	2015	%		2015	%
SPA 1 (Antelope Valley)	<5	<2%		0	0%
SPA 2 (San Fernando)	48	19%		<5	<26%
SPA 3 (San Gabriel)	48	19%		0	0%
SPA 4 (Metro)	49	20%		7	37%
SPA 5 (West)	<5	<2%		0	0%
SPA 6 (South)	38	15%		7	37%
SPA 7 (East)	38	15%		<5	<26%
SPA 8 (South Bay)	21	8%		<5	<26%
***Total**	**249**	**100%**		**19**	**100%**

* Includes 2 TB Cases assigned to Admin/Headquarters in 2015

† SPA data with cells <5 cases suppressed. A TB case is assigned to a SPA at the time of case confirmation.

Provisional data